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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,821	08/09/2006	David K. Roberts	GB040038	6739

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EXAMINER	
WRIGHT, BRYAN F	

ART UNIT	PAPER NUMBER
2431	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/597,821	ROBERTS, DAVID K.	
	Examiner	Art Unit	
	BRYAN WRIGHT	2431	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9 and 11-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7, 9, 11-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to amendment file on 12/16/2008.

2. Claims 1-5 and 9 are amended. Claims 8 and 10 are cancelled. Claims 1-7, 9, and 11-13 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-7, 9, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pelly et al. (US Patent No. 6,954,857 and Pelly hereinafter) in view of Wendt (US Patent Publication No. 2005/0117775).

4. As to claims 1, 9 and 13, Pelly teaches a method of detecting a watermark in an information signal, comprising:

deriving a set of correlation results by correlating the information signal with a watermark for each of a plurality of relative positions of the information signal with respect to the watermark (i.e., ...teaches an accumulator operable to combine the value of the bit at each corresponding position within each recovered version of the data block to generate for each bit an accumulated score [col. 1, lines 65-67; col. 2, lines 1-3] ...further teaches and a detection processor operable to compare the value of the accumulated scores for the bits of the block with at least one threshold, and from the comparison to determine whether each of the bits of the block has been detected [col. 2, lines 3-8]);

calculating a metric (e.g., accumulated score) which is based on a cluster, selected from the overall set of results ((i.e., ... teaches threshold S1 and S2 are a set [col. 7, lines 39-44] ... further teaches obtaining an accumulated score determine based on the threshold bounds of the S1 and S2 [fig. 5]);

and comparing the calculated metric (e.g., log value of the probability) with a cluster threshold value (e.g., Threshold T) which is indicative of the cluster representing a correlation peak (e.g., hump) (i.e., ... teaches A "hump" produced at around detected

bits corresponds to approximately half the bits being detected at being present at random. ... teaches a low value of the probability of a number of detected bits in the range represented by the region of the "hump", and the relative separation of this range from the detection threshold T [col. 8, lines 35-45]).

Pelly does not expressly the claim limitation element of correlating the information signal with a watermark for each of a plurality of relative positions of the information signal with respect to the watermark.

However, these features are well known in the art and would have been an obvious modification of the system disclosed by Pelly as introduced by Wendt. Wendt discloses the claim limitation element of correlating the information signal with a watermark for each of a plurality of relative positions (e.g., sum of product) of the information signal with respect to the watermark (to provide correlation computation based on performing a sum of products of the data contained in the frame of data and the data of the reference watermark [par. 6]).

Therefore, given the teachings of Wendt, a person having ordinary skill in the art at the time of the invention would have recognized the desirability and advantage of modifying Pelly by employing the well known feature of computing correlation based on a reference watermark disclosed above by Wendt, for which watermark detection will be enhanced [par. 6].

5. As to claim 2, Pelly teaches a method where the metric is calculated for a plurality of different clusters selected from the overall set of results (i.e., ... teaches threshold S1 and S2 are a set [col. 7, lines 39-44] ... further teaches obtaining an accumulated score determine based on the threshold bounds of the S1 and S2 [fig. 5]).

6. As to claims 3 and 4, although the system of Pelly show substantial features of the claim invention however Pelly does not disclose:

A method where the metric is calculated for a cluster of results centered on each correlation result in the set of correlation result (claim 3).

A method where the metric is the mean square value of the cluster, of correlation results (claim 4).

However, these features are well known in the art and would have been an obvious modification of the system disclosed by Pelly as introduced by Wendt. Wendt discloses:

A method where the metric is calculated for a cluster of results centered on each correlation result in the set of correlation result (to provide metric calculation capability such that the center remains relative [par. 63]) (claim 3).

A method where the metric is the mean square value of the cluster, of correlation results (to provide mean square value calculation capability for detecting a watermark [par. 143]) (claim 4).

Therefore, given the teachings of Wendt, a person having ordinary skill in the art at the time of the invention would have recognized the desirability and advantage of modifying Pelly by employing the well known feature of using mean square value computation to detect a watermark disclosed above by Wendt, for which watermark detection will be enhanced [par. 143].

7. As to claim 5, Pelly teaches a method where the cluster threshold value varies according to the size of the cluster (col. 7, lines 57-65).

8. As to claim 6, Pelly teaches a method further comprising an initial step of identifying at least one cluster of correlation results which are likely to represent a correlation peak (e.g., hump) and only performing the step of calculating the metric on each of the identified clusters (i.e., …teaches is a graphical representation of a probability distribution for a number of detected bits from material which has not been watermarked. …teaches a "hump" produced at around 65 detected bits corresponds to approximately half the bits being detected at being present at random. the low value of the probability of a number of detected bits in the range represented by the region of the "hump" [col. 8, lines 34-41]).

9. As to claim 7, Pelly teaches a method where the step of identifying clusters of correlation results comprises determining all correlation results in the set which exceed a detection threshold value and then determining which of those correlation results are located within a predetermined distance of each other (i.e., ... teaches a third threshold parameter T. ... teaches threshold parameter T is provided in order to determine whether or not the detection processor 135 declares that data has or has not been embedded within the video material. ...teaches the detection processor 135 is arranged to count the number of 0s and 1s which have been declared as being detected. ... further teaches if this number is above the threshold T then it is declared that data has been embedded into the video material and that therefore this material has been watermarked [col. 8, lines 10-20]).

Pelly does not expressly teach the claim limitation element of determining which of those correlation results are located within a predetermined distance of each other. However, these features are well known in the art and would have been an obvious modification of the system disclosed by Pelly as introduced by Wendt. Wendt discloses the claim limitation element of determining which of those correlation results are located within a predetermined distance of each other (to provide position deviation computing capability [204, fig. 5])

Therefore, given the teachings of Wendt, a person having ordinary skill in the art at the time of the invention would have recognized the desirability and advantage of modifying Pelly by employing the well known feature of computing position deviation for watermark detection disclosed above by Wendt, for which watermark detection will be enhanced [104, fig. 5].

10. 8. (Cancelled)

11. 10. (Cancelled)

12. As to claim 11, Pelly teaches a watermark detector where the means for deriving a set of correlation results, the means for calculating a metric and the means for comparing the calculated metric comprise a processor which is arranged to execute software for performing those functions (col. 12, lines 10-16).

13. As to claim 12, Pelly teaches a apparatus for presenting an information signal comprising means for disabling operation of the apparatus in dependence on the presence of a valid watermark in the information signal, wherein the apparatus comprises a watermark detector (e.g., detection processor) (col. 9, lines 15-30 & 43-50).

Response to Arguments

Applicant's arguments, see Applicant Remarks, filed 12/16/2008, with respect to the rejection(s) of claim(s) 1-7, 9, and 11-13 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Pelly and Wendt. The teaching of Wendt specifically teaches the use of mean square value computation for purpose of detecting a watermark [par. 143].

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN WRIGHT whose telephone number is (571)270-3826. The examiner can normally be reached on 8:30 am - 5:30 pm Monday -Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, AYAZ Sheikh can be reached on (571)272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRYAN WRIGHT/
Examiner, Art Unit 2431

/Ayaz R. Sheikh/
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